

AMENDMENTS TO THE CLAIMS

Please cancel Claims 7 and 9; amend Claim 1; and, add new Claims 11-15 as follows.

LISTING OF CLAIMS

1. (currently amended) An air conditioner for a vehicle: wherein

a first cold air passage through which cold air flows and a first hot air passage through which hot air flows are provided, in parallel with each other, in a first air passage through which conditioned air is discharged to a first zone in a vehicle compartment;

a second cold air passage through which cold air flows and a second hot air passage through which hot air flows are provided, in parallel with, each other in a second air passage through which conditioned air is discharged to a second zone in a vehicle compartment;

the first air passage comprises a first cold air door for opening and closing the first cold air passage and a first hot air door for opening and closing the first hot air passage;

the second air passage comprises a second cold air door for opening and closing the second cold air passage and a second hot air door for opening and closing the second hot air passage;

the temperature of air discharged from the first air passage into the first zone is adjusted by adjusting the proportion of the flow rate of cold air in the first cold air passage with respect to the flow rate of hot air in the first hot air passage by means of the first cold air door and the first hot air door;

the temperature of the air discharged from the second air passage into the second zone is adjusted by adjusting the proportion of the flow rate of cold air in the second cold air passage with respect to the flow rate of hot air in the second hot air passage by means of the second cold air door and the second hot air door;

the air flow rate in the first air passage is controlled independently by changing the passage opening area of the first air passage by means of the first cold air door and the first hot air door while the proportion of the flow rate of cold air with respect to the flow rate of hot air adjusted by means of the first cold air door and the first hot air door is maintained to be constant; and

the air flow rate in the second air passage is controlled independently by changing the passage opening area of the second air passage by means of the second cold air door and the second hot air door while the proportion of the flow rate of cold air with respect to the flow rate of hot air adjusted by means of the second cold air door and the second hot air door is maintained to be constant and the passage opening area of the first air passage defined by the first cold air door and the first hot air door is maintained to be constant.

2. (original) An air conditioner for a vehicle, as set forth in claim 1, comprising:

a first temperature setting means operated by a passenger and for generating a temperature setting signal of the first zone;

a second temperature setting means operated by a passenger and for generating a temperature setting signal of the second zone;

a first air flow rate adjusting means operated by a passenger and for generating a discharged air flow rate adjusting signal of the first air passage;

a second air flow rate adjusting means operated by a passenger and for generating a discharged air flow rate adjusting signal of the second air passage;

a first door operation mechanism for operating the first cold air door and the first hot air door;

a second door operation mechanism for operating the second cold air door and the second hot air door; and

a control means for receiving signals from the first temperature setting means, the second temperature setting means, the first air flow rate adjusting means and the second air flow rate adjusting means to control the first door operation mechanism and the second door operation mechanism, wherein

the first door operation mechanism is controlled by the control means when a discharged air flow rate adjusting signal of the first air passage is generated by the first air flow rate adjusting means, so that the first cold air door and the first hot air door are operated to be shifted to positions which provide passage opening areas in accordance with the increase or decrease in air flow rate specified by the discharged air flow rate adjusting signal; and wherein

the second door operation mechanism is controlled by the control means when a discharged air flow rate adjusting signal of the second air passage is generated by the second air flow rate adjusting means, so that the second cold air door and the second hot air door are operated to be shifted to positions which provide passage

opening areas in accordance with the increase or decrease in air flow rate specified by the discharged air flow rate adjusting signal.

3. (withdrawn) An air conditioner for a vehicle, as set forth in claim 2, comprising a single fan for supplying air to the first air passage and the second air passage; wherein

the control means calculates a target blowing air temperature (TAOL) of air discharged from the first air passage into the first zone and a target blowing air temperature (TAOR) of air discharged from the second air passage into the second zone; wherein

the control means determines a reference air flow rate of the air flow rate from the first air passage and the second air passage by controlling the air flow rate of the fan based on at least one of the target blowing air temperatures (TAOL, TAOR); wherein

the control means controls the first door operation mechanism so as to increase or decrease the reference air flow rate when a discharged air flow rate adjusting signal of the first air passage is generated by the first air flow rate adjusting means; and wherein

the control means controls the second door operation mechanism so as to increase or decrease the reference air flow rate when a discharged air flow rate adjusting signal of the second air passage is generated by the second air flow rate adjusting means.

4. (withdrawn) An air conditioner for a vehicle, as set forth in claim 1, comprising a single fan for supplying air to the first air passage and the second air passage, wherein

when air flow rate in one of the first air passage and the second air passage is changed by means of the cold air door and the hot air door provided in the passage, air flow rate of the fan is corrected so that change in air flow rate in the other passage can be kept small.

5. (original) An air conditioner for a vehicle, as set forth in claim 1, wherein each of the first cold air door, the first hot air door, the second cold air door and the second hot air door is made of a film door which comprises a film-like member and changes the passage opening area by moving each of the film-like members.

6. (original) An air conditioner for a vehicle, as set forth in claim 1, wherein each of the first cold air door, the first hot air door, the second cold air door and the second hot air door is made of a board door rotatable about each axis of rotation.

7. (cancelled)

8. (original) An air conditioner for a vehicle, as set forth in claim 1, wherein the first zone is a left side zone in a vehicle compartment and the first air passage is a vehicle left side air passage, wherein

the second zone is a right side zone in a vehicle compartment and the second air passage is a vehicle right side air passage, wherein

the air temperature and the flow rate of air discharged from the vehicle left side air passage are independently controlled by means of the first cold air door and the first hot air door, and wherein

the air temperature and the flow rate of air discharged from the vehicle right side air passage are independently controlled by means of the second cold air door and the second hot air door.

9. (cancelled)

10. (withdrawn) An air conditioner for a vehicle, as set forth in claim 1, comprising:

operation mechanisms each capable of controlling the first cold air door, the first hot air door, the second cold air door and the second hot air door independently of each other;

a first temperature setting means for generating a temperature setting signal of the first air passage;

a second temperature setting means for generating a temperature setting signal of the second air passage;

a first air flow rate setting means for generating an air flow rate setting signal of the first air passage;

a second air flow rate setting means for generating an air flow rate setting signal of the second air passage; and

a control means for receiving signals from the first temperature setting means, the second temperature setting means, the first air flow rate setting means and the second air flow rate setting means and for controlling each of the operation mechanisms for each of the doors independently of each other.

11. (new) The air conditioner according to claim 1, further comprising a cooling heat exchanger for cooling air and a heating heat exchanger for heating air, the first hot air door and the second hot air door being disposed between the cooling heat exchanger and the heating heat exchanger.

12. (new) The air conditioner according to claim 1, wherein the first cold air door is coplanar with the first hot air door.

13. (new) The air conditioner according to claim 12, wherein the second cold air door is coplanar with the second hot air door.

14. (new) The air conditioner according to claim 1, further comprising a heating heat exchanger, the first hot air door changing an area of the heating heat exchanger open to air flow through the heating heat exchanger.

15. (new) The air conditioner according to claim 1, wherein the first hot air door moves toward the first cold air door to reduce the proportion of hot air in the first hot air passage and the first cold air door moves toward the first hot air door to reduce the proportion of cold air in the first cold air passage.